



July 7, 2016

Patrick Conway, M.D.
Deputy Administrator for Innovation and Quality
Centers for Medicare & Medicaid Services
200 Independence Avenue
Washington, DC 20001

Dear Dr. Conway:

On behalf of our hospital and health system members, the American Hospital Association (AHA), Association of American Medical Colleges (AAMC), America's Essential Hospitals and Federation of American Hospitals (FAH) are deeply disappointed that we have not been given the opportunity to work with the Centers for Medicare & Medicaid Services (CMS) to examine the serious concerns we have with its star ratings methodology, nor has CMS shared any data to demonstrate the validity of its methodology. In addition, our continued review of the limited information available to us raises serious questions about the ability of the proposed ratings approach to provide accurate and meaningful information to patients.

We urge CMS to share additional information with hospitals and the public about how accurately star ratings portray hospital performance. We also urge CMS to address several significant underlying methodological problems with its star ratings. Until CMS has taken the time to address these problems and share information with hospitals and the public demonstrating that its star ratings methods offer a fair and accurate assessment of hospital quality, we strongly urge the agency to continue to withhold publication of the flawed star ratings.

To be clear, hospitals strongly support transparency on the quality of care they provide. That is why we brought organizations such as CMS, The Joint Commission, the National Quality Forum and others together more than a decade ago to launch a groundbreaking effort to provide credible, important information on hospital quality through public reporting. This multi-stakeholder effort led to the development of the *Hospital Compare* website. Hospitals are investing significant resources to collect, report and use data on hundreds of quality measures – for CMS and other payers and regulators – to inform the public about quality and identify opportunities for performance improvement. Through these efforts, the hospital field has been able to reduce harm and improve patient outcomes, and we remain committed to continuing to improve.

On March 18, we sent CMS a letter raising significant concerns about its star rating methodology, and asked the agency to delay publication until it could more closely examine the methodology. We specifically asked that CMS:

- Analyze the impact on different types of hospitals and provide more transparent information so that the fairness and accuracy of the star ratings could be evaluated.
- Consider the need for a sociodemographic adjustment for readmissions and other outcome measures to create fair comparisons.
- Examine whether the flaws in the hospital-wide readmissions measure and the patient safety indicator (PSI-90) measure bias the rating against hospitals that care for more complex patients.

Since our March 18 letter, we have brought to your staff's attention other concerns, including whether differences in the data reporting requirements for Maryland hospitals around the use of present on admission coding may have affected the ratings and whether small hospitals that have worked hard to drive down their central line and catheter-associated urinary tract infections to zero or near zero are disadvantaged because they do not have enough cases to have these measures count toward their star rating.

Unfortunately, we received virtually no additional information from CMS on any of the issues listed above. The agency provided additional information on how it calculates and assigns star ratings, but far too little information on whether the methodology gives a fair and accurate appraisal of the true quality of care provided in America's hospitals. Since the sole purpose for creating the star ratings is to provide accurate information to the public to guide their decision-making about where to get their care, hospitals and patients alike must have meaningful information on whether the assessment is fair and accurate. The very fact that some of the nation's best known hospitals with the highest of ratings on other assessments and that serve large numbers of low-income and complex patients are slated to receive a small number of stars from CMS should make one question the validity and soundness of the methodology.

Failure to provide information that might offer insights on hospitals' concerns serves no purpose; it does not meet the intent of what Congress urged CMS to do nor what CMS told Congress it would do. Indeed, in letters signed by the majority of both the House and the Senate, lawmakers questioned the accuracy of the star ratings and urged CMS to "work with Congress and members of the hospital community to resolve these concerns." CMS responded by delaying publication of the star ratings. In its notice to Congress, CMS stated that it was "committed to working with hospitals and associations to provide further guidance about star ratings." We are disappointed that this has not happened.

In the absence of additional information from CMS, we have continued to examine the small amount of information that is publicly available, including the updated methodology document (Version 2.0) that was published on the Quality Net website several weeks ago. Further, we asked an independent expert, Dr. Frank Vella, who is the chair of economics at Georgetown University and well-versed in the core aspect of CMS's methodology – latent variable modeling – to review the available information. **While the published methodology provides an adequate**

description of what CMS's assumptions were and what the agency did to calculate the star ratings, it provides very little insight into how well the methodology worked.

In fact, the minimal data available to us do not offer substantive proof that the methodology works as it was intended, and raise many more questions and concerns about the methodology than they answer. The independent analysis (attached) gave us strong reason to believe that the assumptions on which the current model is based are flawed in a number of ways:

- **The model fails to account for other factors that cause substantial variation in performance, and instead attributes the variation solely to quality.** Despite the fact that the methodology document asserts on page 27 that the latent variable analysis is valid, the data displayed in Appendix E actually show that in six of the seven categories, a single variable accounts for less than half of the variation.
- **The assignment of star ratings implies that hospitals have been measured on essentially an equal, or at least an equivalent, basis so that the comparisons are fair. However, that is not true.** In the methodology report, CMS indicates that a quarter of hospitals were assigned a star rating based on 18 or fewer measures, while other hospitals were assigned a star rating based on two or three times that number of measures. We note that this discussion in the methodology report refers to CMS having used 75 measures to assign star ratings, but, at other places in the report, CMS refers to and identifies only 64 measures to be used in assigning stars, so we admit to being a bit confused as to how many measures were actually used to assign stars to any hospital, and what the real variation is in the interquartile range of stars used. Still, it is clear that there is a large difference in the number of measures comprising a star rating for smaller and less complex hospitals versus the number used to assess larger, multispecialty hospitals. CMS provides no information that would show that these disparate bases for judging performance lead to fair and equitable comparisons.

Further, it is not clear how many groups were used to assign the star ratings for smaller hospitals versus larger hospitals, nor is there any information that would allow us to understand if lacking results for any particular measure or for any particular group would make it more or less likely that a hospital would receive a lower (or higher) star rating. **Such a difference would represent a bias in the methodology that is attributable to decisions by CMS and its contractor rather than to the actual performance of the hospital. This is deeply troubling because the use of star ratings would make it appear as if the differences simply were attributable to the hospital's quality.**

- **The assignment of weights to measures and to groups of measures is completely arbitrary, and yet it likely has a significant impact on the number of stars assigned to each hospital.** At the very least, CMS should examine how the use of various weights contributes to the likelihood that a hospital would receive a particular number of stars. Further, CMS should explore how this weighting system affects the results when a number of hospitals have too few measures in a particular category to have a score from that category.

- The model groups the measures CMS selected into seven categories to perform the latent variable analysis and assumes that the categories are independent of each other, and that there is a common factor among the measures within each of the categories. **CMS offers no proof that either of these assumptions, which are vital to the use of a latent variable model, is true.** In fact, simply by looking at the measures lumped into each of the categories, it is clear that there exists at least some commonality among the categories. To the extent to which there is a commonality across the categories, CMS is essentially double-counting the influence of some performance on the overall star rating.
- **CMS crafted a methodology designed to maximize the difference in scores between hospitals in each of the star rating categories, yet its own data show this is not happening in some cases, particularly for Efficient Use of Medical Imaging.** In other words, CMS sought to ensure that those hospitals receiving one star had a different level of performance than those with two stars, those receiving two stars were different than those with three stars, and so forth. So it is not surprising that Pairwise Comparison of Star Categories would reflect differences in scores. What is surprising is the fact that very few of the pairs shown for the Efficient Use of Medical Imaging category show any statistically significant difference in performance. Between the scores of the hospitals CMS rated as one star hospitals and those it rated as five star hospitals, the difference in scores in this category was only 0.35, and that was not a statistically significant difference. In other words, CMS cannot tell the difference in performance among hospitals on Efficient Use of Medical Imaging, and yet the agency includes those measures in the star ratings.

In summary, we urge CMS to share additional information with hospitals and the public about how accurately its star ratings portray hospital performance. We also urge CMS to consider the several significant underlying methodological problems with star ratings laid out in this letter. Until CMS has taken these steps, and engaged in additional work with hospitals to validate the methodology, we strongly urge the agency to continue to withhold publication of the flawed star ratings.

Sincerely,

American Hospital Association
Association of American Medical Colleges
America's Essential Hospitals
Federation of American Hospitals

Attachment: [Francis Vella's Critique of the Star Ratings Methodology as described in the Methodologic Report Version 2.0](#)